IN THE CLAIMS

1. (Currently amended) A cathode for a battery, consisting of:

(a) cathode active material particles;

(b) metal hydroxide particles having a specific surface area of between 2.5 m^2/g and 100 m^2/g, as a cathode additive;

(c) a conductive agent; and

(d) a binder,

wherein the metal hydroxide particles ~~added to~~in the cathode are present in an amount of greater than 0 wt% and less than 10 wt%, and the cathode active material particles and the metal hydroxide particles in the cathode are ~~uniformly mixed~~a uniform mixture with each other, and

wherein the metal hydroxide is $Al(OH)_3$ having an average particle size of 0.8 μm to 8 μm, or $Mg(OH)_2$ having an average particle size of 1.0 μm to 9 μm.

2. and 3. (Canceled)

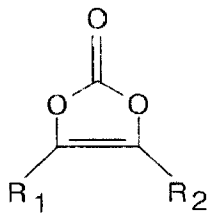
4. (Previously presented) The cathode for a battery according to claim 1, wherein the metal hydroxide particles are at least one compound selected from the group consisting of $Al(OH)_3$, $Mg(OH)_2$, $Ca(OH)_2$, LiOH and NaOH.

5. (Currently amended) A lithium ion battery comprising the cathode as claimed in claim 1, an anode and a non-aqueous electrolyte, wherein the cathode comprises cathode active material particles; and the metal hydroxide particles having a specific surface area of between 2.5 m^2/g and 100 m^2/g, as a cathode additive; the conductive agent; and the binder, and the metal hydroxide particles ~~added to~~in the cathode are present in an amount of greater than 0 wt% and less than 10 wt%, and the cathode active material particles and the metal hydroxide particles in the cathode are ~~uniformly mixed~~a uniform mixture with each other, and

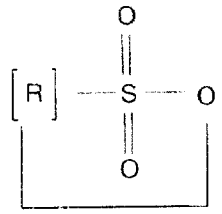
wherein the metal hydroxide is $Al(OH)_3$ having an average particle size of 0.8 μm to 8 μm, or $Mg(OH)_2$ having an average particle size of 1.0 μm to 9 μm.

6. (Original) The lithium ion battery according to claim 5, wherein the electrolyte comprises at least one additive selected from the group consisting of the compounds represented by the following formula 1 to formula 4:

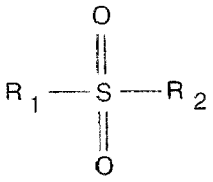
[formula 1]



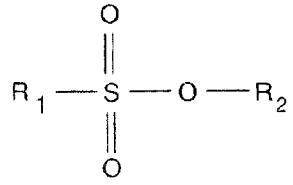
[formula 2]



[formula 3]



[formula 4]



wherein, each of R_1 and R_2 is independently selected from the group consisting of H, a C_1-C_5 alkenyl group, a C_1-C_5 alkyl group, a halogen atom, and a phenyl group and a phenoxy group non-substituted or substituted with a C_1-C_5 alkyl group or a halogen atom (formulae 1,3 and 4); and

R is a C_1-C_5 alkenyl group or a C_1-C_5 alkyl group (formula 2).

7. (Original) The lithium ion battery according to claim 6, wherein the compound represented by formula 1 is selected from the group consisting of VC (vinylene carbonate) and methyl esters, and the compound represented by any one of formula 2 to formula 4 is selected from the group consisting of propane sultone (PS), propene sultone, dimethyl sulfone, diphenyl sulfone, divinyl sulfone and methanesulfonic acid.

8. and 9. (Canceled).

10. (Previously presented) The lithium ion battery according to claim 5, wherein the metal hydroxide particles are at least one compound selected from the group consisting of $Al(OH)_3$, $Mg(OH)_2$, $Ca(OH)_2$, LiOH and NaOH.